

("Title VII"). The case commenced with the filing of a complaint on September 29, 2000, alleging that AutoZone "[1] failed to hire Black applicants for official/manager positions because of their race; [2] failed to hire female applicants for official/manager, technician and service worker positions because of their sex; [3] failed to promote Black and female employees into official/manager positions; and [4] failed to comply with the record keeping requirements of Title VII." (Compl. 1.) The claims of failure to hire female applicants for technician positions and failure to promote Black employees into official/manager positions were dismissed on May 16, 2005, and July 7, 2005, respectively.

The EEOC's expert, Dr. Burt Barnow, a labor economist, conducted a study of discrimination against women and African-Americans in hiring and promotion at AutoZone between 1993 and 2002. In his study, Dr. Barnow found statistically significant shortfalls in the hiring and promotion of women and African-Americans in some of the job classifications included in the EEOC's initial complaint. (Barnow Report 1-2, Jan. 31, 2005.) In response to Dr. Barnow's findings, AutoZone hired its own expert, Dr. Arnold Levine, a mathematician and statistician, to examine Dr. Barnow's statistical methodology. Dr. Levine has testified as an expert statistician in forty-five cases over the last twenty-five years, many of which involved Title VII claims, and his

affidavits, reports, or deposition testimony have been used in about seventy-six other cases. (Def.'s Opp'n Mot. in Limine 1.)

II. Jurisdiction

The court has jurisdiction to adjudicate federal claims under 28 U.S.C. § 1331.

III. Standard for Admission of Expert Testimony

Where the evidence requires an understanding of scientific, technical, or other specialized knowledge, a qualified expert witness may testify to assist the trier of fact. Fed. R. Evid. 702. The testimony must be (1) based upon sufficient facts or data, (2) the product of reliable principles and methods, and (3) a reliable application of the principles and methods to the facts of the case. Id.

It is the responsibility of the trial judge, as "gatekeeper," to determine whether a proposed expert's testimony "both rests on a reliable foundation and is relevant to the task at hand." Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 597 (1993). Some factors that the trial judge may consider are: (1) whether the "theory or technique...can be (and has been) tested"; (2) "whether the theory or technique has been subjected to peer review and publication"; (3) what "the known or potential rate of error" is for a technique; and (4) whether the theory or technique has been generally accepted. Id. at 594.

"[T]he trial judge must have considerable leeway in deciding

in a particular case how to go about determining whether particular expert testimony is reliable," and the Daubert factors should be considered only "where they are reasonable measures of the reliability of expert testimony." Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152 (1999). The data and the expert's opinion should have a logical connection beyond the *ipse dixit* of the expert. Gen. Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997). "A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered" to allow such expert testimony. Id.

IV. Analysis

The EEOC argues that Dr. Levine is not qualified as an expert witness under the Federal Rules of Evidence and Daubert. First, the EEOC asserts that Dr. Levine is attempting to apply statistical methodologies that are used in other fields, but not in labor economy or Title VII discrimination studies, and that Dr. Levine's attempt to apply those methodologies shows that he is not sufficiently familiar with the field of labor economy to qualify as an expert. The EEOC also argues that Dr. Levine seeks to confuse the jury through his testimony by exaggerating the importance of allegedly minor and inconsequential problems with Dr. Barnow's study. Further, the EEOC asserts that Dr. Levine in his deposition testimony and expert report has misused an expert treatise on discrimination statistics, David C. Baldus & James

W.L. Cole, Statistical Proof of Discrimination (1980) ("Baldus & Cole"). The EEOC argues that Dr. Levine's study lacks methodological diligence because it was designed to fit his presumption that AutoZone did not discriminate and because it relies heavily on data provided by AutoZone and on assumptions made by counsel for AutoZone. Finally, the EEOC argues that other courts have disregarded Dr. Levine's expert testimony because of flaws like those it cites in this case. Therefore, the EEOC asserts that Dr. Levine should be excluded as an expert witness or, in the alternative, that his testimony should be limited.

A. Dr. Levine's Statistical Methodologies

In his report, Dr. Levine faults Dr. Barnow for not using a statistical correction to account for the effects of multiple testing. Dr. Barnow, in conducting his study, performed sixty-four tests, finding statistically significant underutilization of women or African-Americans in five of those tests and statistically significant overutilization of women or African-Americans in ten. (Def.'s Opp'n Mot. 3-4.) According to David H. Kaye & David A. Freedman, Reference Guide on Statistics, in Reference Manual on Scientific Evidence 83, 127 (Fed. Judicial Ctr. 2000) ("the Manual"), "[r]epeated testing complicates the interpretation of significance levels. If enough comparisons are made, random error almost guarantees that some will yield

'significant' findings, even when there is no real effect." The authors note that certain statistical methods can be used in some cases to determine whether the findings are significant, but that, in other cases, there is no solution capable of overcoming the flaws in a model caused by multiple testing. Id. at 128.

According to Dr. Levine, the use of any method of statistical adjustment on Dr. Barnow's data would eliminate the finding of statistical significance in all five of the tests where Dr. Barnow found Autozone underutilized women or African-Americans. (Levine Dep. 41:7-10, May 26, 2005.) One of the methods of statistical adjustment Dr. Levine discusses is the Bonferroni adjustment. The EEOC contends that the Bonferroni adjustment is not used in the field of labor economy or in employment discrimination claims, but only in medical and psychological research.

The EEOC notes that it "does not contest that Bonferroni stringency may be appropriate in medical research, for example, where absence of error is the *sine qua non*, but such strictness is not required for proof in employment cases." (Pl.'s Mot. in Limine 6.) In essence, the EEOC is arguing that general statistical concerns about overtesting do not apply in the employment discrimination context because the accuracy of statistical results is not essential in that context. The EEOC offers no reason to persuade the court that multiple testing does

not lead to the same problems in employment discrimination as in other fields. Furthermore, despite the EEOC's argument that Dr. Levine is insufficiently familiar with the field of labor economy to testify as an expert in this case, Dr. Levine does not seek to testify as an expert in labor economy but in statistics, a field in which he is clearly qualified by education and experience. Therefore, Dr. Levine's testimony on multiple testing and statistical adjustments is admissible.

B. Dr. Levine's Alleged Attempts to Confuse the Jury

In some of the tables in his report, Dr. Barnow includes a column titled "Probability of Number Hired or Fewer." (Barnow Report 27-29.) This column reports the results of a one-tailed test, but there is no indication either from Dr. Barnow's report or from Dr. Levine's analysis of that report that Dr. Barnow's results were based on the one-tailed test. That Dr. Barnow's conclusions were not based on the one-tailed probabilities, however, does not mean that noting the inclusion of those probabilities in Dr. Barnow's report makes Dr. Levine's testimony unreliable.

Because Dr. Barnow's results were based on the two-tailed probabilities and not the one-tailed probabilities, the fact that the results of a one-tailed test are included in some tables in his report has a low probative value. The extended discussion that would be required to explain the difference between one-

tailed and two-tailed tests and the relative merits of each type of test, however, would be very time consuming. Therefore, because considerations of judicial economy outweigh the probative value of this part of Dr. Levine's testimony, it is excluded under Fed. R. Evid. 403.

C. Baldus & Cole

For his tests on discrimination in hiring females for guard positions, the EEOC gave Dr. Barnow eighteen successful guard applications. (Barnow Dep. 113:24-114:7, May 25, 2005.) AutoZone had provided the EEOC with one hundred and thirty-seven guard applications, but Dr. Barnow was not given access to these. (Id. at 115:4-14.) Rather, based on the eighteen applications that he was given, Dr. Barnow concluded that the Memphis metropolitan statistical area ("Memphis MSA") should be used to establish a baseline. (Id. at 114:8-13; Barnow Report 12.) Dr. Barnow then used census data based on the EEO-1 job classification from the Memphis MSA to function as a geographic proxy for the actual applicant data. (Barnow Report 9-10.)

Dr. Levine criticizes Dr. Barnow's use of geographic proxies rather than actual applicant data, citing Baldus & Cole. (Levine Dep. 78:23-79:6.) The EEOC asserts that Dr. Levine's criticism is based on an erroneous understanding of Baldus & Cole, indicating that Dr. Levine is not qualified to testify as an expert. The controversy, however, is not based on a misunderstanding of

Baldus & Cole, but on a dispute about the reliability of the available applicant data. Baldus & Cole states that there is a general presumption in favor of using the actual applicant data,¹ but that there are exceptions to that presumption, such as where the applicant data is unreliable. Baldus & Cole §§ 4.1.1, 4.12.

It appears that the EEOC determined on its own that the applicant data supplied by AutoZone was unreliable and, therefore, did not give it to Dr. Barnow to allow him to make his own determination about its reliability. Dr. Barnow himself stated in his deposition that he had no reason to reject the use of the applicant data supplied by AutoZone without having examined it first. (Barnow Dep. 116:3-9.) Therefore, based on the information before the court, Dr. Levine's expert testimony should not be excluded because he misunderstands relevant expert treatises or because it relates to the dispute about the reliability of the actual applicant data.

D. Dr. Levine's Alleged Lack of Methodological Diligence

According to the EEOC, Dr. Levine's analysis lacks methodological diligence because he adopted his methodology to fit the presumption that AutoZone did not discriminate on the

¹ The EEOC also disagrees with Dr. Levine's use of the terms "best evidence" and "direct evidence" to describe the applicant data provided by AutoZone to the EEOC. It claims that these terms imply legal conclusions because "best evidence" and "direct evidence" are legal terms of art. In context, however, it is clear that Dr. Levine uses these terms as statistical rather than legal terms, referring to the presumption that actual applicant data should generally be used in studies of discrimination.

basis of race or gender. The EEOC argues that Dr. Levine's testimony should not be allowed because he relied uncritically on data AutoZone supplied him and on assumptions made by counsel for AutoZone. As evidence of these methodological flaws, the EEOC cites Dr. Levine's belief that the applicant data for the guard position supplied by AutoZone was reliable, Dr. Levine's alleged reliance on AutoZone's own classification of its workforce into EEO-1 classifications, and Dr. Levine's use of AutoZone's definition of feeder groups for promotions.

As discussed in the previous section, there is no good reason to give greater weight to the opinion of the EEOC that the applicant data supplied by AutoZone was unreliable than to Dr. Levine's view to the contrary. That the one hundred and thirty-seven applications supplied by AutoZone to the EEOC could not have been all of the guard applications for the years 1993 to 2002 is not sufficient to show that the data is unreliable or biased, rather than a random, representative sample of all of the applications from that period.²

As to the EEOC's argument that Dr. Levine's analysis is methodologically unsound because he relied on AutoZone's

² Hazelwood Sch. Dist. v. United States, 433 U.S. 299, 308 (1977), and Dothard v. Rawlinson, 433 U.S. 321, 330 (1977), are not to the contrary. In those cases, the Supreme Court found that a prima facie case of discrimination could be based on evidence of general demographic data rather than actual applicant data, but the Court did not find that using a sample of applicant data is necessarily so unreliable as to require that general demographic data be used instead.

classification of its workforce into EEO-1 categories, Dr. Levine's report indicates that he did not so rely. (Levine Report 24, Apr. 28, 2005.) The EEOC also argues that Dr. Levine relied on data classifications from AutoZone because he is not qualified to classify the data independently in that he lacks the proper qualifications to use EEO-1 job categories. The EEOC makes this argument based on the fact that Dr. Levine is not a labor economist. In so doing, it disregards his past experience consulting on affirmative action plans and in employment discrimination cases and claims that there is no basis beyond the *ipse dixit* of Dr. Levine on which to base a finding that he is qualified as an expert as to EEO-1 classifications.

In support of its position, the EEOC cites Meals v. City of Memphis, 2005 WL 948769 (W.D. Tenn. Apr. 15, 2005). In that case, however, the court excluded expert testimony where the proposed expert "had never before studied the effects of paraplegia," the subject matter of the study at issue in the case, and had only conducted three studies that were methodologically similar to the one about which he proposed to testify. Id. at 2. In this case, Dr. Levine's extensive record of experience in the area of employment discrimination and affirmative action establishes that he is qualified to testify about EEO-1 classifications.

Finally, the EEOC's argument that Dr. Levine is unqualified because of his acceptance of AutoZone's feeder groups for

promotion misunderstands Dr. Levine's position. The EEOC implies that Dr. Levine concluded that the company's feeder groups should be used because he was hired by AutoZone. Dr. Levine's explanation of his position, however, shows that his reasons are more complex. Dr. Levine stated in his deposition testimony that he chose to use AutoZone's feeder groups because practically a company's feeder groups will always be more realistic than those created solely for the purpose of a study. (Levine Dep. 114:13-115:2, 115:18-116:12.) Given this explanation, the court cannot find that Dr. Levine's use of AutoZone's feeder groups is sufficient to disqualify him from testifying as an expert witness.

E. Exclusion of Dr. Levine's Testimony by Other Courts

The EEOC asserts that Dr. Levine's testimony should be excluded in its entirety because, in the past, his testimony has been "discredited." It cites two cases to support this proposition, Prohaska v. Sofamor, S.N.C., 138 F. Supp. 2d 422 (W.D.N.Y. 2001), and Cooper v. Smith & Nephew, Inc., No. Civ. JFM 97-2578, 2000 WL 1728024 (D. Md. Nov. 20, 2000). Both decisions excluded experts whose testimony had been excluded in prior cases, but in both cases the exclusion of the expert was based on the shortcomings of his proposed testimony in the case before the court. Dr. Levine's proposed testimony in this case does not have the same deficiencies as the testimony of the proposed experts in

the cases cited by the EEOC. It should be noted also that Dr. Levine's testimony has not previously been found so deficient as to require exclusion, nor does an examination of the cases where his testimony has been discounted by various courts raise any concerns about the admissibility of his testimony in this case. Therefore, because Dr. Levine is qualified to testify as an expert and his proposed testimony meets the standards of Rule 702 and Daubert, the EEOC's motion to exclude Dr. Levine's testimony in its entirety is denied.

V. Conclusion

Plaintiff's motion in limine to exclude testimony from Dr. Arnold Levine in its entirety is DENIED.

Plaintiff's motion in limine to limit testimony from Dr. Levine is GRANTED in part in that Dr. Levine's testimony on the inclusion of one-tailed tests in the charts in Dr. Barnow's report is excluded.

So ordered this 28th day of December 2005.



SAMUEL H. MAYS, JR.

UNITED STATES DISTRICT JUDGE



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